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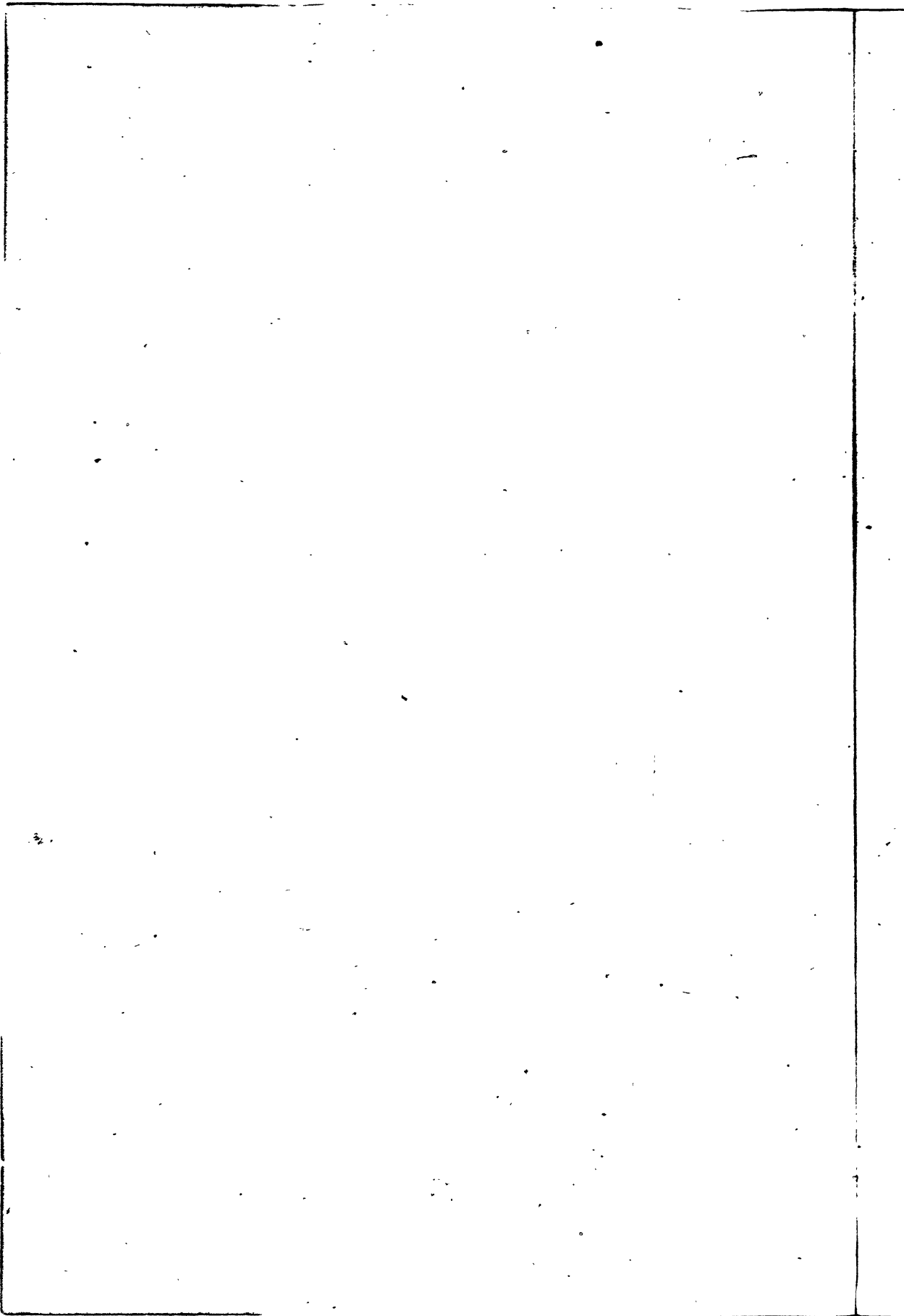
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finding only human bones, confusedly mixed, which he estimated at a thousand skeletons.

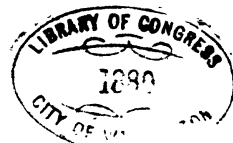
A SEMI-CIRCULAR NOTCH

About one-third or three-eighths inch in size is sometimes present in the lateral margin of a thin leaf-shaped stone knife, as if too large a chip had been accidentally detached in getting the outline: but the size, regularity, and sharpness of edge, indicate that such a notch was for a purpose—such as scraping arrow-shafts, or material for strings; and a notch in the base of broken arrow-heads seems sometimes to have been rounded for this purpose.

A BASAL NOTCH.

Occurs in some arrow-heads (Jones, pl. 9, pg. 36; Abbott, figs. 66-68), which I have regarded as intended to be fitted upon a suitable elevation in the notch of the shaft to prevent lateral motion. Among some modern stone-tipt arrows presented to me by Mr. Johnston Moore, of Carlisle, Pa., I find a head adapted in this manner and fastened with gum of *Larrea Mexicana*, a wrapping of sinew being restricted to the end of the shaft. Besides the gum, other examples are tied with sinew passing through the ordinary notch on each side, as figured from a California example, in Nilsson's *l'Age de la pierre*, Paris, 1868, fig. 104. The same quiver contains an arrow (the shortest of the lot) with a dagger-shaped iron point five and a half inches long beyond the shaft, from which we may infer that certain supposed long and slender stone spear-heads may often have belonged to arrows.

—o:o—



SKETCH OF THE KLAMATH LANGUAGE OF SOUTHERN OREGON.

BY ALBERT S. GATSCHET.

The Pacific slope of the Sierra Nevada and of the Rocky Mountains in the British Possessions is inhabited by Indians whose race-type differs in many particulars from the one observed east of the Rocky Mountains. Their idioms, when classed in language-families, are found to extend over areas considerably smaller than those of the Mississippi Valley and the Atlantic Coast of North America. These linguistic stocks or families, and their limits, could be established with some degree of certainty only a few years ago, when material more trustworthy than heretofore came to hand, and even now these classifications must be regarded as *provisional* for different reasons. It will suffice to mention the two principal reasons

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why a certainty in this respect can be expected only from more active investigations in the future :

1. We know of most of these idioms only as far as their lexicon is concerned, through scanty vocabularies, while the grammatic or morphological part of them is the only *decisive* criterion for linguistic affinity.

2. We do not know and never will know the historical evolution through which every one of these idioms has passed. This deficiency can be supplied, but in a certain degree only, by a careful study of the several dialects of one stock, where dialects exist. In several languages of the Old World we are enabled to trace this historic development through twenty or thirty centuries, and this has, f. i., made it possible to prove that the Irish and the Sanskrit languages have sprung from one and the same stock, though they seem, at first sight, to be totally dissimilar in grammatic forms as well as in their dictionary.

The Klamath language forms one of these narrowly circumscribed linguistic families, which to our present knowledge seems to have no congeners, though the idioms spoken on Middle Columbia River have not yet been thoroughly compared with it for want of material. This language is spoken by two tribes only, the Klamath Lake people and the Modocs, in two dialects which are almost identical and therefore should be called *subdialects*. The ancient home of these tribes is situated east of the Cascade Range, between 120° and 122° west of Greenwich, and from about 41° 30' to 43° 30' northern latitude, thus extending from southwestern Oregon into northeastern California.

The Modoc Tribe held the southern part of this area, roaming through Lost River Valley and the volcanic ledges between Lower Klamath Lake and Goose Lake. These Indians were called "Moatokni," "Dwellers on the Southern Lake," from one of their principal camping grounds on Modoc Lake, which is our Tule or Rhett Lake. Modoc Lake is called Moatok or Moatak in that Indian language, from *muat*, "south." This tribe first came into prominent notice through the bloody Modoc war of 1873, and as a consequence of this struggle one half of the tribe was removed to the northeastern portion of the Indian Territory (about 140 individuals), and the other half remained at Yainex, in Upper Sprague River Valley.

The Klamath Lake Tribe occupied the northern part of the ancient Klamath-Modoc territory. A portion of them haunted the shores of Klamath Marsh; others, the Plaikni, or "Uplanders," the country along Sprague River, while the main bulk inhabited the shores of Williamson River and Upper Klamath Lake, and were called E-ukshikni, or "Lake Dwellers," from e-ush, *lake*. The camps on Klamath Marsh are now abandoned, but the other settlements still exist, the whole population amounting to about 600 individuals.

The two tribes now live exclusively within the Klamath Indian Reservation. They call themselves *maklaks*, which means "those living in camps," and is also their common term for "Indians," and for "men" generally.

In the present *phonetic* state of the Klamath language consonants predominate in number over vowels about in the same degree as in Latin, and the language is easily pronounceable to those who have mastered two peculiar sounds, not occurring in English, the *k* and the *χ*. The laws governing the phonetic changes produced by assimilation, dissimilation and reduplication show that these Indians possess a fine feeling for phonetic harmony. Every sound can stand at the beginning of a word, but quite a number of them cannot become final sounds. Consonantic clusters produced through elision of vowels are mainly found at the end of words. Every vowel and every consonant is, just as in other American languages, interchangeable with one or several others pronounced with the same mouth organ. The language lacks *f* and *r*, makes very limited use of *z*, *o* and *u*, while the sibilants *s*, *sh*, all gutturals, including *k* and *χ*, and the palatals *tch*, *dsh*, predominate over dentals and labials. The grammatical accent usually rests on the radical syllable, but is frequently removed from it by syntactic emphasis or by what is called the "secondary accent." Nasal sounds are rarely met with, and the diphthongs are of adulterine character.

Morphologically the Klamath tongue of southwestern Oregon is analytic in its relations of noun and verb to direct or indirect object, but synthetic in a considerable degree in its inflection; and still more so in its derivative forms. The parts of Klamath speech are more perfectly differentiated than in many other Indian languages, and although no true verb exists, only a noun-verb, it is made more distinct from the noun than this is done in Kalapuya, f. i. Its active form is identical with the passive, a large number of verbal prefixes and suffixes are common to the noun and this may be said also of the reduplicated form which indicates distribution and in many instances corresponds pretty closely with our plural. The possessive pronouns are not identical with the personal pronouns, though the majority of them are formed by the possessive cases of the latter. Substantive nouns can be formed from verbs by appending *sh*, though this same suffix also serves to form verbal nouns corresponding more or less to our infinitives and our participles in *ing*. Verb and noun undergo an inflection for tense, but in a quite different manner and with different suffixes. By prefixation and suffixation the Klamath verb forms medial, reciprocal, reflective, iterative, usitative, frequentative, causative, as well as many other forms, which we can only circumscribe by conjunctions or long sentences. Modes are partly expressed by suffixes, partly by separate particles, but no real incorporation of the subject-pronoun into the verbal basis is observed. This circumstance tends to make the acquisition of this upland idiom considerably easier than of many other Indian languages, in which a full conjugational system exists distinguishing the three persons through singular, plural and dual. On the other side a profound and unremitting study is required to comprehend the polysynthesis of the word-composing suffixes.

Klamath is eminently a suffix language, for suffixes preponderate to a large extent over prefixes, and what appear to be infixes or particles infixes into the basis, to indicate relation, are in fact not infixes into the monosyllabic root, but suffixes to it. Prefixes are used here to mark shape or external form in noun or verb, and in the latter to show the *genus verbi*, while suffixes fulfil the purposes of inflection and discriminate the various forms of speech from each other by becoming derivative or word-formative syllables or syllable-fragments. With great precision this language marks in its pronouns and verbal suffixes the distance of the real or supposed speaker from the persons or objects alluded to, and although Klamath cannot contend in power of abstraction with English, French, Italian or Spanish, it largely surpasses these idioms in graphic vivacity of expression, in terseness, concrete precision and laconic brevity. The tendency of being graphic and intuitively descriptive has produced a number of synonymous terms in all the Indian languages; a slight idea of this can be obtained by perusing Rev. Stephen B. Riggs' Dakota Dictionary. This collection contains over 15,000 terms, and Dakota is at least equalled in the amount of words by the Klamath idiom and probably surpassed by the Sahaptin dialects. Facts like these should at least dispel entirely the vulgar prejudice of the paucity of words and ideas to be found in the beautiful languages of our American aborigines, the wonderful structure of which has aroused the admiration of every student whose mind was above the common standard of mediocrity.

Compound words, viz: nouns combined with nouns, (and verbs with auxiliary verbs), are not uncommon, though as a rule *binary* only. The noun is inflected for case by case-suffixes and postpositions, and the case-suffixes are often compound ones. The declension of the adjective and the numeral differs somewhat from that of the substantive and is less complete in its forms, owing to the agglutinative character of the language. The formation of a distributive form by redoubling the first syllable, which is usually the radical, pervades the whole language down to the adverb and forms one of its most peculiar characteristics. Still more explicitly this feature is developed in the Flathead language of Montana, belonging to the Selish family, for it can occur there in three different shapes of one and the same term. A reduplication to form the plural is found in all the tongues of the Nahuatl and Numa (or Shoshoni) stock, but what we observe in Klamath differs from it in signification, being not a real plural, but a distributive form intended to mark severalty.

I conclude this rapid grammatical sketch with the remark that Klamath possesses no article, neither definite nor indefinite. But the expressive and deictic character of the language usually leaves no doubt in the hearers' mind whether *the* person or *a* person is meant, and the great variety of demonstrative pronouns and participles help to give precision to the speech in this respect.

